

The Claims

1. (Currently amended) A method comprising:

reserving a Quality of Service (QoS) resource pool, wherein the QoS resource pool comprises a predetermined portion of available bandwidth between a first reservation protocol proxy and a second reservation protocol proxy, wherein the first reservation protocol proxy represents a first network device coupled in communication with a packet network and associated with a first user community, wherein the second reservation protocol proxy represents a second network device coupled in communication with the packet network and associated with a second user community for real-time communication sessions among users of the first user community and the second user community; and

providing end-to-end application QoS between the first user community and the second user community by selectively admitting a plurality of real-time communication sessions between the first user community and the second user community based upon currently available resources associated with the QoS resource pool and multiplexing the plurality of real-time communication sessions over a common reservation protocol session between the first reservation protocol proxy and the second reservation protocol proxy;

wherein said reserving a predetermined portion of available bandwidth between the first reservation protocol proxy and the second reservation protocol proxy includes pre-allocating the reservation protocol session over a path through the packet network between the first network device and the second network device; and

wherein the reservation protocol session comprises a Resource Reservation Protocol (RSVP) session, wherein the first network device and the second network device are part of a geographically distributed voice over Internet Protocol (VoIP) network, and wherein the packet network comprises the VoIP network.

2. (Canceled).
3. (Canceled).
4. (Previously presented) The method of claim 1, wherein at least one of the plurality of real-time communication sessions includes a H.323 session and a Real-time Transport Protocol (RTP) session.
5. (Previously presented) The method of claim 1, wherein the first user community and the second user community comprise subscribers to a long distance carrier.
6. (Previously presented) The method of claim 1, wherein the first user community and the second user community comprise employees of an enterprise at a first geographic location and a second geographic location, respectively.
7. (Previously presented) The method of claim 1,

wherein the packet network comprises the Internet.

8. (Previously presented) The method of claim 1, wherein:

a first local network supporting the first user community comprises Internet Protocol (IP) telephony products of a first vendor which are in communication with a first IP private branch exchange (PBX) call management agent; and

a second local network supporting the second user community comprises IP telephony products of a second vendor which are in communication with a second IP PBX call management agent.

9. (Previously presented) The method of claim 1, wherein the plurality of real-time communication sessions comprise voice over IP (VoIP) calls carrying voice or voice-band data.

10. (Currently amended) A method comprising:

establishing an aggregated reservation protocol session over a path between a first reservation protocol proxy and a second reservation protocol proxy, wherein the first reservation protocol proxy represents a first device coupled to a public Internet Protocol (IP) network, wherein the second reservation protocol proxy represents a second device coupled to the public IP network; and

providing end-to-end Quality of Service (QoS) on behalf of users of a distributed voice over IP (VoIP) environment by (i) selectively admitting a plurality of VoIP calls between those of the users associated with a first user community that access the public

IP network via the first device and those of the users associated with a second user community that access the public IP network via the second device based on resources associated with the aggregated reservation protocol session and a desired level of service and (ii) multiplexing the plurality of VoIP calls onto the aggregated reservation protocol session;

wherein said establishing the aggregated reservation protocol session between the first reservation protocol proxy and the second reservation protocol proxy includes establishing the aggregated reservation protocol session over a path through the public IP network between the first device and the second device; and

wherein the aggregated reservation protocol session comprises a Resource Reservation Protocol (RSVP) session, wherein the first device and the second device are part of a geographically distributed VoIP network, and wherein the public IP network comprises the VoIP network.

11. (Currently amended) A method comprising:

establishing a Resource Reservation Protocol (RSVP) session between a first network device and a second network device that are part of a geographically distributed enterprise voice over Internet Protocol (VoIP) network, wherein said establishing the RSVP session between the first network device and the second network device includes establishing the RSVP aggregated reservation protocol session over a path through the VoIP network between the first network device and the second network device;

receiving, at the first network device from a first local terminal, a request to initiate a first VoIP call with a first remote terminal associated with the second network device;

allocating a portion of pre-allocated resources associated with the RSVP session to the first VoIP call between the first local terminal and the first remote terminal;

receiving, at the first network device from a second local terminal, a request to initiate a second VoIP call with a second remote terminal associated with the second network device;

allocating a portion of the pre-allocated resources associated with the RSVP session to the second VoIP call between the second local terminal and the second remote terminal; and

providing a desired level of Quality of Service (QoS) to both the first VoIP call and the second VoIP call by sharing the RSVP session between the first VoIP call and the second VoIP call by multiplexing packets containing voice or voice-band data associated with the first and second VoIP calls onto the RSVP session.

12. (Currently amended) The method of claim 11, further comprising: transmitting packets from the first local terminal and to the first remote terminal by forming an encapsulated packet at the first network device that includes tag information to allow the second network device to determine the packets are intended for the first remote terminal[[;]] and to allow the second network device to remove ~~removing~~ the tag information ~~at the second network device~~ prior to forwarding the packets to the first remote terminal.

13. (Previously presented) The method of claim 12, wherein the tag information includes the IP address of the first local terminal.

14. (Previously presented) The method of claim 12, wherein the tag information includes the IP address of the first remote terminal.

15. (Previously presented) The method of claim 12, wherein the tag information includes a packet type indicator that specifies how to further identify a subprocess within the first remote terminal.

16. (Previously presented) The method of claim 11 wherein the first local terminal and the first remote terminal comprise IP phones.

17. (Previously presented) The method of claim 11 wherein the first local terminal and the first remote terminal comprise computer systems running an Internet telephony application.

18. (Canceled).